Form PTO-1449 (Modified)

U.S. DEPT. OF COMMERCE PATENT AND TRADEMARK OFFICE Atty. Dkt. No.: 082380-00339

Serial Number: 09/481,351

INFORMATION DISCLOSURE STATEMENT

Applicant(s):

David R. Payne, Gerald A.

Stangl, Norman E. Stevens,

Jr. and Michael F. Gard

Title:

SYSTEM AND METHOD FOR **AUTOMATICALLY DRILLING**

AND BACKREAMING A

HORIZONTAL BORE

UNDERGROUND

(Use several sheets if necessary)

(37 CFR 1.98 (b))

Filing Date: Group:

January 12, 2000

3672

JAN 1 2001

Sheet 5 of 7 Sheets

Examiner:

Not Yet Assigned

U.S. PATENT DOCUMENTS

TO 3600 MAIL ROOM

EXAM INIT.	REF.		I	PATEN	IT NU	ЈМВ Е	R		ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPRO- PRIATE
RA	СВ	5	7	0	4	4	3	6	01/06/98	Smith et al.	175	27	03/25/96
7	СС	5	7	1	1	3	8	1	01/27/98	Archambeault et al.	175	45	01/16/96
	CD	5	7	1	3	4	2	2	02/03/98	Dhindsa	175	27	02/28/94
	CE	5	7	2	0	3	5	4	02/24/98	Stump et al.	175	26	01/11/96
	CF	5	7	4	6	2	7	8	05/05/98	Bischel et al.	175	24	03/13/96
	CG	5	7	7	8	9	9	1	07/14/98	Runquist et al.	175	61	08/29/96
	СН	5	8	1	2	0	6	8	09/22/98	Wisler et al.	340	855.5	12/12/95
	CI	5	8	3	3	0	1	5	11/10/98	Hesse et al.	175	40	04/03/97
	CJ	5	8	5	0	6	2	4	12/15/98	Gard et al.	702	92	10/18/95
	СК	5	8	8	0	6	8	0	03/09/99	Wisehart et al.	340	853.4	12/06/96
	CL	5	9	0	4	2	1	0	05/18/99	Stump et al.	175	45	01/17/97
	СМ	5	9	1	4	6	0	2	06/22/99	Mercer	324	326 .	05/20/98
	CN	5	9	4	1	3	2	0	08/24/99	Austin et al.	175	27	06/24/97
	со	5	9	4	4	1	2	1	08/31/99	Bischel et al.	175	24	04/29/98

DATE CONSIDERED **EXAMINER**

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(37 CFR 1.98 (b)) Sheet 4 of 7 Sheets Filing Date:

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TO 3600 MAIL ROOM

U.S. PATENT DOCUMENTS

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EXAM INIT.	REF.		F	PATEN	NT NU	JMBE	R		ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPRO- PRIATE
RNA	-BO	5	4	4	9	0	4	7	09/12/95	Schivley, Jr.	175	27	09/07/94
	ВР	5	4	6	5	7	9	8	11/14/95	Edlund et al.	175	24	10/25/94
	BQ	5	4	6	9	1	5	5	11/21/95	Archambeault et al.	340	853.4	07/11/94
	BR	5	4	7	4	1	4	2	12/12/95	Bowden	175	27	04/19/93
	BS	5	5	1	3	7	1	0	05/07/96	Kuckes	175	45	11/07/94
	ВТ	5	5	3	8	4	2	3	07/23/96	Coss et al.	433	27	11/26/93
	BU	5	5	5	6	2	5	3	09/17/96	Rozendaal et al.	414	797.7	05/11/95
	BV	5	5	6	4	4	5	5	10/15/96	Keating et al.	137	2	01/06/95
	BW	5	5	8	5	7	2	6	12/17/96	Chau	324	326	05/26/95
	BX	5	6	0	7	2	8	0	03/04/97	Rozendaal	414	745.7	12/06/95
	BY	5	6	7	9	8	9	4	10/21/97	Kruger et al.	73	152.03	10/10/95
	BZ	5	6	8	4	4	6	6	11/04/97	Keating et al.	340	662	09/12/95
	CA	5	7	0	3	4	8	4	12/30/97	Bieberdorf et al.	324	207.22	10/04/93

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SYSTEM AND METHOD FOR

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UNDERGROUND

January 12, 2000

(Use several sheets if necessary) (37 CFR 1.98 (b))

Sheet 3 of 7 Sheets

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TO 3600 MAIL ROOM

U.S. PATENT DOCUMENTS

EXAM INIT.	REF.		1	PATEN	NT NU	JMBE	R		ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPRO- PRIATE
RA	ВВ	3	2	6	9	3	8	3	12/14/93	Forrest	175	26	01/15/92
	ВС	: 5	2	9	4	2	2	8	03/15/94	Willis et al.	414	22.55	08/28/91
	BD	; 5	3	2	0	1	8	0	06/14/94	Ruley et al.	175	26	10/08/92
	BE	5	3	3	2	0	4	8	07/26/94	Underwood et al.	175	26	10/23/92
	BF	5	3	4	1	8	8	6	08/30/94	Patton	175	24	07/27/93
	BG	5	3	4	8	1	0	6	09/20/94	Mattero	175	27	06/22/93
	ВН	5	3	5	8	0	5	8	10/25/94	Edlund et al.	175	24	09/27/93
	BI	5	3	9	0	7	4	8	02/21/95	Goldman	175	24	11/10/93
	BJ	5	4	1	9	4.	0	5	05/30/95	Patton /	175	27	02/18/93
	BK	5	4	2	1	4	2	0	06/06/95	Malone et al.	175	61	06/07/94
	BL	5	4	3	9	0	6 >	4	08/08/95	Patton	175	24	10/09/92
	ВМ	5	4	4	4	3	8	2	08/22/95	Mercer	324	690	06/14/94
1	BN	5	4	4	9	0	4	6	09/12/95	Kinnan	175	24	12/23/93

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Atty. Dkt. No.: 082380-00339 Form PTO-1449 **U.S. DEPT. OF COMMERCE** (Modified) PATENT AND TRADEMARK OFFICE Serial Number: 09/481,351 INFORMATION DISCLOSURE STATEMENT Applicant(s): David R. Payne, Gerald A. Stangl, Norman E. Stevens, Jr. and Michael F. Gard Title: SYSTEM AND METHOD FOR **AUTOMATICALLY DRILLING** AND BACKREAMING A **HORIZONTAL BORE UNDERGROUND** Filing Date: (Use several sheets if necessary) January 12, 2000 JAN 11 2001 (37 CFR 1.98 (b)) 3672 Group: Sheet 2 of 7 Sheets **Examiner:** Not Yet Assigned 100MAL ROOM

U.S. PATENT DOCUMENTS

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EXAM INIT.	REF. PATENT NUMBER						R		ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPRO- PRIATE
Rw	AO	4	6.	8	8	9	7	0	08/25/87	Eckman	408	9	08/09/85
I	AP	4	7	1	0	7	0	8	12/01/87	Rorden et al.	324	207	07/23/82
	AQ	4	7	3	0	2	5	4	03/08/88	Voden, Jr.	364	422	02/03/86
	AR	4.	7	9	3	4	2	1	12/27/88	Jasinski	175	27	07/13/87
	AS	4	8	5	4	3	9	7	08/08/89	Warren et al.	175	26	09/15/88
	AT	4	8	5	6	6	0	0	08/15/89	Baker et al.	175	26	10/21/88
	AU	4	8	7	5	0	1	4	10/17/89	Roberts et al.	324	326	07/20/88
	AV	4	8	7	5	2	9	2	10/24/89	Gibson	33	304	04/08/86
	AW	4	8	8	1	0	8	3	11/14/89	Chau et al.	342	459	10/02/86
	AX	4	9	5	1	7	5	9	08/28/90	Richardson	175	85	06/05/89
	AY	4	9	9	2	7	8	7	02/12/91	Helm	340	854	09/20/88
	AZ	5	0	2	7	1	0	8	06/25/91	Gray	340	662	03/05/90
	ВА	5	2	2	0	9	6	3	06/22/93	Patton	175	24	12/22/89

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HORIZONTAL BORE
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(37 CFR 1.98 (b))

Sheet 1 of 7 Sheets

JAN 11 2001

Filing Date:

January 12, 2000

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TO 3600 MAIL BOOM U.S. PATENT DOCUMENTS

EX/		REF.		F	PATEN	IT NU	JMBEI	R		ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPRO- PRIATE
Pu	A) AA 3 7 1 3 5 0 0				0	01/30/73	Russell	175	73	04/08/70			
		AB	3	9	3	8	5	9	7	02/17/76	Richmond et al.	- 175	24	11/29/74
		AC	3	9	3	9	9	2	6	02/24/76	Barnes et al.	175	24	11/29/74
		AD	4	0	4	2	0	4	3	08/16/77	Appleman	173	152	07/02/75
		AE	4	1	1	3	0	3	3	09/12/78	Lindblad	173	1 .	09/02/77
,		AF	4	1	8	7	5	4	6	02/05/80	Heffernan et al.	364	565	03/15/77
		AG	4	1	9	5	6	9	9	04/01/80	Rogers et al.	175	27	06/29/78
		AH	4	2	7	5	7	9	3	06/30/81	Schivley, Jr. et al.	173	9	02/14/77
		ΑI	4	4	4	9	5	9	2	05/22/84	Mayer	175	52	03/23/81
П		AJ	4	4	6	3	8	1	4	08/07/84	Horstmeyer et al.	175	45	11/26/82
		AK	4	5	0	1	1	9	9	02/26/85	Mashimo et al.	102	313	02/10/83
	-	AL	4	5	3	1	8	7	5	07/30/85	Krueger	414	22	08/17/82
		AM	4	6	0	4	7	2	4	08/05/86	Shaginian et al.	364	478	10/04/85
		AN	4	6	6	7	7	5	1	05/26/87	Geczy et al.	175	61	10/11/85

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Sheet 6 of 7 Sheets

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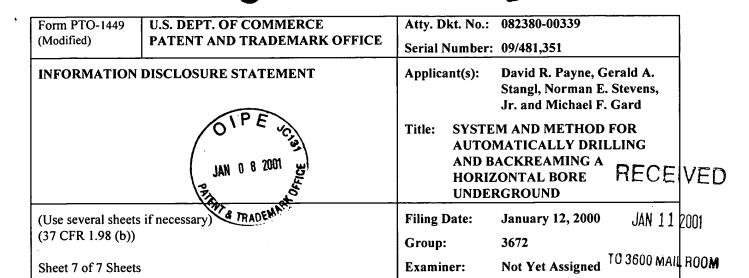
U.S. PATENT DOCUMENTS

TO 3600 MAIL ROOM

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EX		REF.		F	PATEN	JN TI	лмве	R		ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPRO- PRIATE
K	N)	_CP	5	9	6	1	2	5	2	10/05/99	Mercer et al.	405	175	10/20/97
		CQ	6	0	0	8	6	5	1	12/28/99	Mercer	324	326	08/18/98
		CR	6	0	2	1	3	7	7	02/01/00	Dubinsky et al.	702	9	10/23/96
		CS	6	0	3	5	9	5	1	03/14/00	Mercer et al.	175	45	04/16/97
		СТ	6	0	4	7	7	8	3	04/11/00	Mercer et al.	175	45	10/21/99
		CU	6	0	7	9	5	0	6	06/27/00	Mercer	175	45	04/27/98
		cv	6	0	8	5	8	5	2	07/11/00	Sparks et al.	175	52	03/29/96
		CW	6	0	9	1	3	3	7	07/18/00	Arshad et al.	340	662	03/15/99
		CX	6	0	9	5	2	6	0	08/01/00	Mercer et al.	175	45	10/21/99
	П	CY	6	1	0	9	3	6	7	08/29/00	Bischel et al.	175	24	08/27/99
		CZ	6	1	1	9	3	7	6	09/19/00	Stump	37	348	08/25/97
		DA	6	1	6	1	6	3	0	12/19/00	Stump et al.	175	26	05/13/99

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FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

-			D	OCUN	MENT	NUM	BER		PUBL. DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION YES NO
	DB	9	2	1	4	0	2	7	08/20/92	PCT	E21B	7/04	N/A
	DC	9	7	2	5	5	1	9	07/17/97	PCT	E21B	47/022	N/A
_	DD	9	7	3	3	0	6	5	09/12/97	PCT	E21B	7/06	N/A
	DE	9	7	4	9	8	8	9	12/31/97	PCT	E21B	7/04	N/A
	DF	0	4	6	7	6	4	2	01/22/92	EPO	E21B	4/20	N/A
	DG	0	5	9	4	4	1	8	04/27/94	EPO	E21B	44/00	N/A
	DH	0	6	8	6	7	5	2	12/13/95	EPO	E21B	7/06	N/A
	DI	0	7	1	8	6	4	1	06/26/96	EPO	E21B	47/12	N/A
·	DJ	0	7	9	9	9	6	9	10/08/97	EPO	E21B	44/00	Yes
	DK	0	8	0	6	5	4	2	11/12/97	EPO	E21B	7/06	N/A

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^{*} The date should include at least the month and year for a foreign application.

^{**}Place of Publication refers to name of publication in which the information being submitted was published. SVO/tdr/387145